

REMARKS

Claims 1 - 6 and 16 - 23 remain in this application. Reconsideration of this application is respectfully requested.

In the Office Action, claims 1 - 3, 5, 16 - 19, and 21 - 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Matsuoka et al. (U.S. Patent No. 6,196,040, hereinafter "Matsuoka"). Applicant respectfully traverses this rejection.

Matsuoka discloses a special kind of fill cam that is referred to as a rotary cam. This rotary cam is used in a single stroke die and is a unique type of fill cam with a rotary motion. It bears no resemblance to the present invention because the rotary cam of Matsuoka is for a single stroke, single hit operation.

In contrast, the present invention is a compound press-forming apparatus that utilizes a two-step process in which the die closes and opens in a first stage configuration, shifts to a second configuration, and then closes and opens again, rehitting a workpiece in the die. The present invention can make two distinct die hits in a single press apparatus, whereas conventionally such an operation required two separate die press apparatus.

Hence, with respect to independent claims 1, 16, and 17, Matsuoka does not disclose a side-face working apparatus that is disposed at a side of said lower die on the fixed-side portion of the press machine to conduct side-face press working to a side-face portion of a work jointly with the lower die, as claims 1, 16, and 17 require. Matsuoka does not include a side-face working apparatus that conducts side-face press work on a side-face portion of a workpiece jointly with the lower die. The slide cam 9 and columnar body 6 of Matsuoka are not side-face working apparatus. The slide cam 9 and columnar body 6 also do not conduct work on the workpiece W jointly with the lower die 1. Instead, the forming portion 10 of the slide cam 9 works jointly with the pads 22 of the columnar body 6 to form the workpiece W. Also, the slide cam 9 and columnar body 6 are not disposed at a side of the lower die 1. Rather, the slide cam 9 and columnar body 6 are disposed on top of (above) the lower die 1.

Further, Matsuoka does not disclose a side-face working apparatus that moves to an avoidance position, in which the side-face working apparatus is not in the way of the upper die going up and down during press working by the upper and lower dies, as claims 1, 16, and 17 require. The columnar body 6 of Matsuoka does not and cannot move to such an avoidance position, and such an avoidance position is not shown in FIG. 10 of Matsuoka. When the columnar body 6 is turned as shown in FIG. 10, the upper die 4 has already been raised (see column 8, line 58 through column 9, line 10). Also, in this orientation, the columnar body 6 is in the way of the upper die going up and down (plate 90 is in the way and would be struck by slide cam 9 if the upper die were lowered). The columnar body 6 must be turned back to the orientation shown in FIGS. 7 – 9 prior to the upper die being lowered; no press work can be performed when the columnar body 6 is in the orientation shown in FIG. 10.

Furthermore, when the columnar body 6 is in the orientation shown in FIG. 10, it is not in a position that is out of the way of the upper die going up and down during press working by the upper and lower dies. In fact, the upper die 4 and lower die 1 of Matsuoka do not perform press work on a workpiece W independent from the columnar body 6, which is in contrast to the present invention, in which the upper and lower die perform press work on a workpiece independent from the side-face working apparatus when the side-face working apparatus is in an avoidance position, and when the side-face working apparatus is moved to a working position, the side-face working apparatus performs press work jointly with the lower die. In this regard, Matsuoka also does not disclose an upper die and a lower die having corresponding working portions to jointly conduct press work to a workpiece, as claims 1, 16, and 17 require. The upper die 4 and lower die 1 of Matsuoka do not have portions (i.e., surfaces formed on the die) that jointly conduct press work on the workpiece W. Instead, only the columnar body 6 and slide cam 9 conduct press work on the workpiece W. The slide cam 9 and columnar body 6 are not portions of the lower and upper die; they are separate components that are connected to the lower and upper die, respectively. It is also of note that the supporting surface 2 of the lower die 1

and the pad 13 do not perform press work on the workpiece W, but merely clamp and hold the workpiece W before the forming step is begun (see column 6, lines 15 – 19).

For all of these reasons, claims 1, 16, and 17 are patentable over Matsuoka. Claims 2, 3, and 5, depending directly or indirectly from claim 1, and claims 18, 19, 21, and 22, depending directly or indirectly from claim 17, are also patentable over Matsuoka. Therefore, applicant respectfully requests that the Section 102(b) rejection of claims 1 – 3, 5, 16 – 19, and 21 – 22 as being anticipated by Matsuoka be withdrawn.

Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka. Applicant respectfully traverses this rejection.

Applicant incorporates by reference the arguments made above with respect to the patentability of independent claim 17 over Matsuoka. Based upon those arguments, claim 17 is patentable over Matsuoka. Claim 20, depending indirectly from claim 17, is also patentable over Matsuoka. Therefore, applicant respectfully requests that the Section 103(a) rejection of claim 20 as being unpatentable over Matsuoka be withdrawn.

Claims 4, 6, and 23 were objected to as being dependent upon a rejected base claim, but were found allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Based upon the arguments above, independent claims 1 and 17 are allowable. Therefore, applicant submits that claims 4, 6, and 23 depending from either claim 1 or claim 17, are also in allowable form.

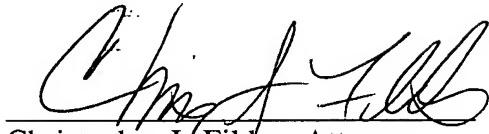
This request for reconsideration is felt to be fully responsive to the comments and suggestions of the examiner and to place this application in condition for allowance. Favorable action is requested.

U.S. Application No. 10/630,188 -- 5

Respectfully submitted,

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